

**WHAT IS CLAIMED IS:**

1. A processed meat composition comprising a modified oilseed material, wherein the modified oilseed material comprises at least 85 wt. % protein on a dry solids basis; and the modified oilseed material has an  $MW_{50}$  of at least 200 kDa; and an EOR of no more than about 0.75 mL.

2. The processed meat composition of claim 1 wherein the modified oilseed material comprises modified soybean material including at least 90 wt. % protein on a dry solids basis.

3. The processed meat composition of claim 1 comprising about 1 to 5 wt. % of the modified oilseed material.

4. A processed meat composition comprising a modified oilseed material, wherein the modified oilseed material comprises at least 85 wt. % protein on a dry solids basis; at least about 40 wt. % of the modified soybean material has an apparent molecular weight greater than 300 kDa; and the modified oilseed material has an EOR of no more than about 0.75 mL.

5. A processed meat composition comprising a modified oilseed material, wherein the modified oilseed material comprises at least 85 wt. % protein on a dry solids basis; at least about 40 wt. % of the modified soybean material has an apparent molecular weight greater than 300 kDa; and the modified oilseed material has a melting temperature of at least 87°C.

6. A processed meat composition comprising a modified oilseed material, wherein the modified oilseed material comprises at least 85 wt. % protein on a dry solids basis; and the modified oilseed material has an  $MW_{50}$  of at least 200 kDa, and a melting temperature of at least 87°C.

7. A processed meat composition comprising a modified oilseed material, wherein the modified oilseed material comprises at least 85 wt. % protein on a dry solids basis; at least about 40 wt. % of the modified oilseed material has an apparent molecular weight greater than 300 kDa; and the modified oilseed material has a viscosity slope of at least about 30 cP/min.

8. A processed meat composition comprising a modified oilseed material, wherein the modified oilseed material comprises at least 85 wt. % protein on a dry solids basis; and the modified oilseed material has an MW<sub>50</sub> of at least 200 kDa, and a viscosity slope of at least about 30 cP/min.

9. A processed meat composition comprising a modified soybean material, water and ground meat;

wherein the modified soybean material comprises at least 90 wt. % protein on a dry solids basis; and the modified soybean material has an MW<sub>50</sub> of at least 400 kDa.

10. A processed meat composition comprising a modified soybean material, water and ground meat;

wherein the modified soybean material comprises at least 90 wt. % protein on a dry solids basis; at least about 60 wt. % of the modified soybean material has an apparent molecular weight greater than 300 kDa.

11. The processed meat composition of claim 10 wherein the modified soybean material has an EOR of no more than about 0.75 mL.

12. The processed meat composition of claim 10 wherein the modified soybean material has a bacterial load of no more than about 50,000 cfu/g.

13. The processed meat composition of claim 10 wherein the modified soybean material has a ratio of sodium ions to a total amount of sodium, calcium and potassium ions of no more than about 0.5.

14. The processed meat composition of claim 10 wherein the modified soybean material has no more than about 7000 mg/kg (dsb) sodium ions.

15. The processed meat composition of claim 10 wherein the modified soybean material has a latent heat of at least about 5 joules/g.

16. The processed meat composition of claim 10 wherein the modified soybean material includes at least about 1.4 wt.% cysteine as a percentage of total protein.

17. The processed meat composition of claim 10 wherein at least about 40 wt.% of the protein in a 50 mg sample of the modified soybean material is soluble in 1.0 mL water at 25°C.

18. The processed meat composition of claim 10 wherein the modified soybean material has a turbidity factor of no more than about 0.95 at 500 nm.

19. The processed meat composition of claim 10 wherein the modified soybean material has a dry Gardner L value of at least about 85.

20. The processed meat composition of claim 10 wherein the ground meat includes ground chicken.

21. A processed meat composition comprising a modified oilseed material, wherein the modified oilseed material is produced by a process which includes:

extracting oilseed material with an aqueous alkaline solution to form a suspension of particulate matter in an oilseed extract; and

passing the extract through a filtration system including a microporous membrane to produce a permeate and a protein-enriched retentate, wherein the microporous membrane has a filtering surface with a contact angle of no more than 30 degrees.

22. The processed meat composition of claim 21 wherein the modified oilseed material is produced by a process which includes:

extracting soybean material at 20°C to 60°C with an aqueous solution having a pH of 7.5 to 10.0 to form a mixture of particulate matter in an alkaline extract solution;

removing at least a portion of the particulate matter from the mixture to form a clarified extract; and

passing the clarified extract at 55°C to 60°C through a filtration system including a microporous modified polyacrylonitrile membrane to produce a permeate and a protein-enriched retentate, wherein the microporous modified polyacrylonitrile membrane has an MWCO of 25,000 to 500,000 and a filtering surface with a contact angle of no more than 30 degrees.

23. The processed meat composition of claim 22 wherein the modified oilseed material is produced by a process which further includes diafiltering the protein-enriched retentate through the filtration system to produce a protein-containing diafiltration retentate.

24. The processed meat composition of claim 23 wherein the modified oilseed material is produced by a process which further includes heating the diafiltration retentate to at least 75°C for a sufficient time to form a pasteurized retentate.

25. The processed meat composition of claim 22 wherein the modified oilseed material is produced by a process which includes extracting the soybean material at 20°C to 60°C for no more than one hour with the aqueous solution to form the mixture.

26. The processed meat composition of claim 21 wherein the modified oilseed material is produced by a process which includes:

extracting the oilseed material at 20°C to 60°C with an aqueous solution having a pH of 7.5 to 10.0 to form a mixture of particulate matter in an alkaline extract solution;

removing at least a portion of the particulate matter from the mixture to form a clarified extract;

passing the clarified extract at 55°C to 60°C through a filtration system including a microporous modified polyacrylonitrile membrane to produce a permeate and a protein-enriched retentate, wherein the microporous modified polyacrylonitrile membrane has an MWCO of 25,000 to 500,000 and a filtering surface with a contact angle of no more than 30 degrees; and

diafiltering the protein-enriched retentate through the filtration system to produce a protein-containing diafiltration retentate.

27. A processed meat composition comprising a modified soybean material, sugar and a triacylglycerol component;

wherein the modified soybean material comprises at least 90 wt. % protein on a dry solids basis; at least about 40 wt. % of the modified soybean material has an apparent molecular weight greater than 300 kDa; and the modified soybean material has a viscosity slope of at least about 30 cP/min and a melting temperature of at least 87°C.